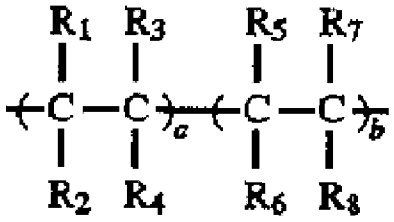
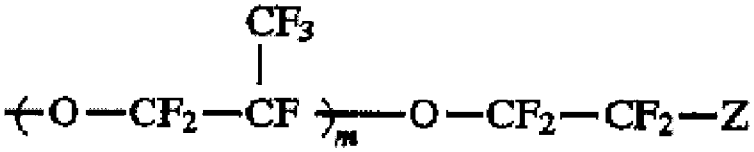
THE CLAIMS

Please rewrite the claims as follows:

1. (Twice Amended) A golf ball having [an outer surface] a core and a cover layer surrounding the core, wherein the improvement comprises forming at least [said outer surface] the cover layer of a thermoplastic material comprising at least one functionalized fluoropolymer, wherein said fluoropolymer has the formula



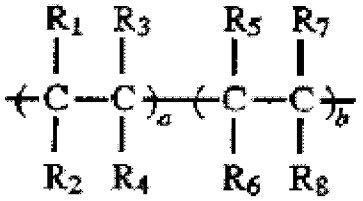
in which a is a number from 1 to 100; b is a number from 99 to 1; R_1-R_7 are independently selected from the group consisting of H, F, alkyl, and aryl; wherein at least one of R_1-R_7 is F; and R_8 is [H, F, or] a moiety of the formula



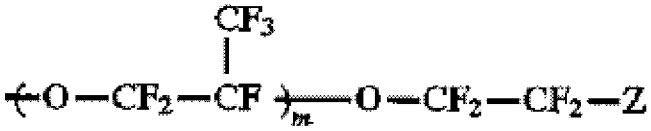
in which m is a number from 1 to 18; and Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb, and transition elements.

2. (Twice Amended) The golf ball of [any] claim 1 wherein [said outer surface] the cover layer is comprised of up to about 100 wt % of said functionalized fluoropolymer.

3. (Thrice Amended) A golf ball having at least [an outer surface] a cover layer formed of a material selected from the group consisting of thermoplastic materials and thermosetting materials, wherein the improvement comprises applying upon [said outer surface at least one layer of] the cover layer [a] at least one coating layer [material], [said] the coating layer [material] comprising at least one functionalized fluoropolymer, wherein said fluoropolymer has the formula

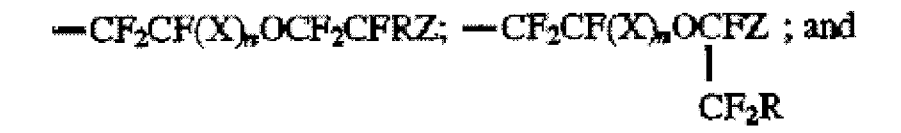


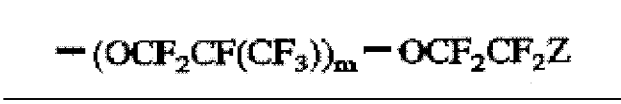
in which a is a number from 1 to 100; b is a number from 99 to 1; R_1-R_7 are independently selected from the group consisting of H, F, alkyl, and aryl; wherein at least one of R_1-R_7 is F; and R_8 is [H, F, or] a moiety of the formula



in which m is a number from 1 to 18: and Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb, and transition elements, and

wherein the fluoropolymer has molecular units selected from the group consisting of

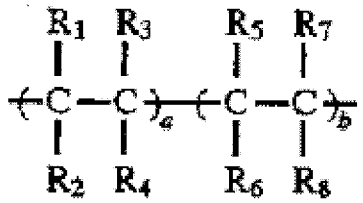




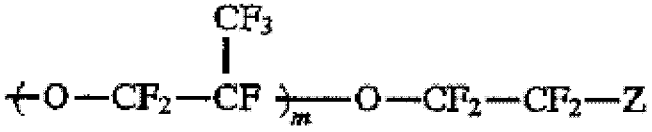
wherein X is $O(CF_2)_{2\text{-}10}$, OCF_2CFY, or $OCFYCF_2$ where Y is F or CF_3; Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb and transition elements; R is F or a perfluoroalkyl group having up to 10 carbon atoms; n is 0, 1 or 2; and m is 7-10.

4. (Twice Amended) The golf ball of claim 3 wherein [said] at least one coating layer [material] is comprised of up to about 100 wt % of said functionalized fluoropolymer.

5. (Twice Amended) A golf ball having [an outer surface] a core and a cover layer surrounding the core, [said] the golf ball having at least one coating layer deposited upon [said outer surface] the cover layer, [said outer surface] the cover layer formed of a material selected from the group consisting of thermoplastic materials and thermosetting materials, wherein at least [said outer surface] the cover layer and [said] at least one coating layer comprise at least one functionalized fluoropolymer, wherein said fluoropolymer has the formula

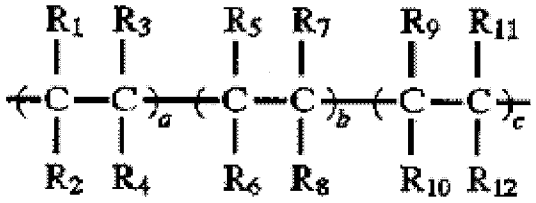


in which a is a number from 1 to 100; b is a number from 99 to 1; R_1-R_7 are independently selected from the group consisting of H, F, alkyl, and aryl; wherein at least one of R_1-R_7 is F; and R_8 is [H, F, or] a moiety of the formula

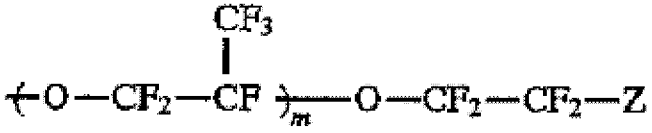


in which m is a number from 1 to 18; and Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb, and transition elements.

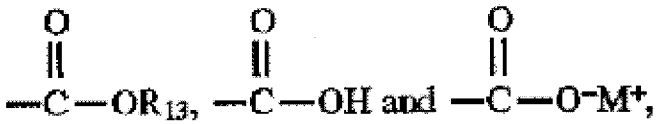
6. (Thrice Amended) A golf ball having a cover layer wherein the improvement comprises forming at least the cover layer of a thermoplastic material comprising at least one functionalized fluoropolymer, wherein the fluoropolymer has the formula [The golf ball of any one of claims 1, 3 or 5 wherein said fluoropolymer is a terpolymer having the formula]



wherein a is number from 1 to 100; b is a number from 99 to 1; [C] c is a number from 1 to 50; R_1-R_7 are each selected from the group consisting of H, F, alkyl, and aryl; wherein at least one of R_1-R_7 is F; and R_8 is a moiety of the formula

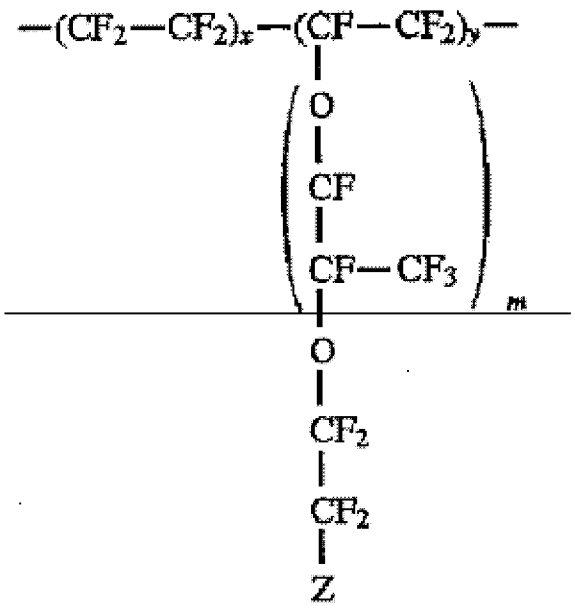


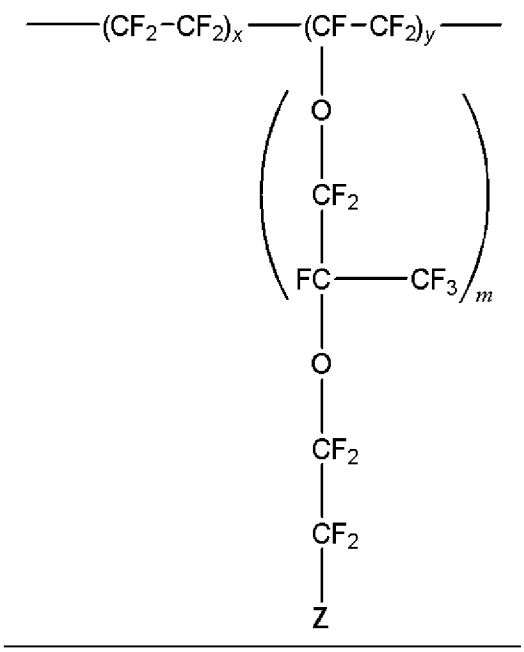
in which m is a number from 1 to 18; and Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb, and transition elements; R_9-R_{11} are independently selected from the group consisting of H, F, alkyl and aryl; and R_{12} is selected from the group consisting of



wherein R_{13} is a C_1-C_{12} linear or branched chain alkyl group.

7. (Thrice Amended) The golf ball of any claims 1[, 3] or 5 wherein [said] the fluoropolymer has the formula





wherein m is 1-12; x is 1-100; y is 99 to 1; and Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb, and transition elements.

8. (Original) The golf ball of claim 7 wherein m is a number from 7 to 10.

9. (Thrice Amended) The golf ball of [any one of] claim 7 wherein [said] <u>the</u> fluoropolymer is formed by copolymerizing <u>perfluorothylene or a perfluoro-α-olefin with</u> a vinyl ether having a structure selected from the group consisting of

$CF_2=CFOCF_2CF(CF_3)OCF_2CF_2Z$;

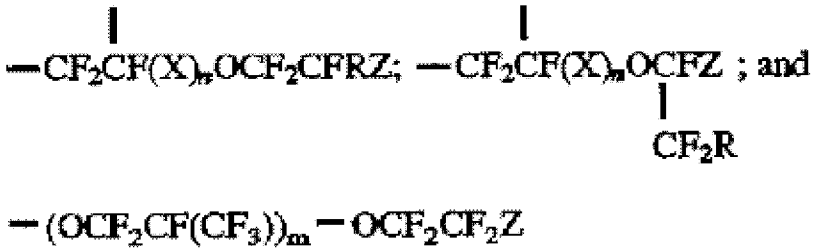
$CF_2=CF(X)_nOCF_2CFRZ$; and

$CF_2=CF(X)_nOCF(Z)CF_2R$

wherein X is $O(CF_2)_{2\text{-}10}$, OCF_2CFY, or $OCFYCF_2$, ~~with Y=F~~ <u>where Y is F</u> or CF_3 ; Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb and

transition elements; R is F or a perfluoroalkyl group having up to 10 carbon atoms; and n is 0, [[11]] 1, or 2.

10. (Thrice Amended) The golf ball of any one of claims 1[, 3] or 5 wherein [said] the fluoropolymer has molecular units selected from the group consisting of



wherein X is $O(CF_2)_{2\text{-}10}$, OCF_2CFY, or $OCFYCF_2$ where Y is F or CF_3; Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected [for the] from Group [group] I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb and transition elements; R is F or a perfluoroalkyl group having up to 10 carbon atoms; n is 0, 1 or 2; and m is 7-10.

11. (Amended) The golf ball of any one of claims 1, 3 or 5 wherein [said] the fluoropolymer is a perfluoropolymer that is sulfonated or carboxylated.

12. (Twice Amended) The golf ball of claim 1 or 5 wherein [said] the fluoropolymer comprises from about 10 to about 90% of at least [said outer surface] the cover layer and wherein about 90 to about 10% of [said outer surface] the cover layer is comprised of one or more non-fluorinated thermoplastic polymers selected from the group consisting of ionomeric polymers, non-ionomeric polymers, and mixtures thereof.

13. (Twice Amended) The golf ball of claim 1 or 5 wherein [said] the [ball comprises at least one cover layer and a] core[, and wherein said outer surface comprises said cover layer] comprises two or more layers.

14. (Canceled)

15. (Amended) The golf ball of claim 13 wherein [said] the fluoropolymer is blended with at least one additional thermoplastic ionomer.

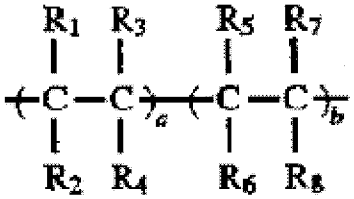
16. (Amended) The golf ball of claim 13 wherein [said] the fluoropolymer is blended with at least one non-ionomeric thermoplastic resin.

17. (Amended) The golf ball of claim 3 or 5 wherein [said] the fluoropolymer comprises from about 10 to about 90% of [said] the coating and wherein about 90 to about 10% of [said] the coating is comprised of one or more non-fluorinated thermoplastic polymers selected from the group consisting of ionomeric polymers, non-ionomeric polymers, and mixtures thereof.

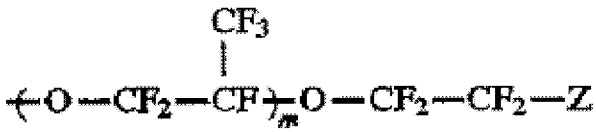
18. (Twice Amended) A method of enhancing the cut and abrasion resistance of a golf ball comprising the steps of:

a) forming a golf ball core; and

b) forming a cover around [said] the core by molding a cover stock material comprising a fluoropolymer about [said] the core, wherein [said] the fluoropolymer has the formula

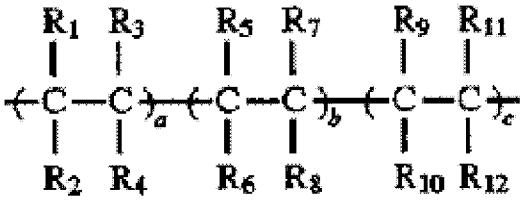


in which a is a number from 1 to 100; b is a number from 99 to 1; R_1-R_7 are independently selected from the group consisting of H, F, alkyl, and aryl; wherein at least one of R_1-R_7 is F; and R_8 is [H, F, or] a moiety of the formula

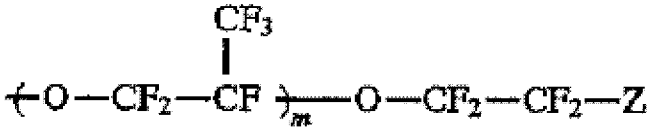


in which m is a number from 1 to 18; and Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb, and transition elements.

19. (Twice Amended) The method of claim 18 which further comprises choosing a cover stock material comprising a fluoropolymer, wherein the fluoropolymer is a terpolymer having the formula



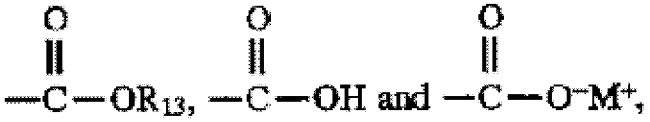
wherein a is number from 1 to 100; b is a number from 99 to 1; c is a number [form] from 1 to 50; R_1-R_7 are each selected from the group consisting of H, F, alkyl, and aryl; wherein at least one of R_1-R_7 is F; and R_8 is a moiety of the formula



---

in which m is a number from 1 to 18; and Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb, and transition elements; R_9-R_{11} are independently

selected from the group consisting of H, F, alkyl and aryl; and R_{12} is selected from the group consisting of

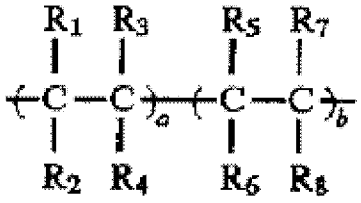


wherein R_{13} is a C_1-C_{12} linear or branched chain alkyl group.

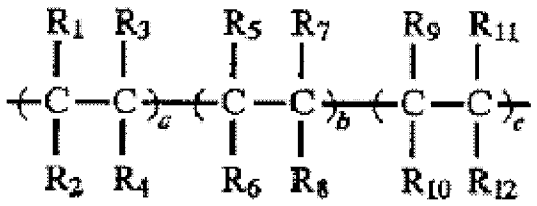
20. (Amended) The method of claim 18, wherein [said] the fluoropolymer is selected from the group consisting of perfluoropolymers that are sulfonated or carboxylated and their salts.

21. (Amended) The method of claim 20, wherein [said] the cover material comprises from about 10 to about 90% of [said] the fluoropolymer and wherein from about 90 to about 10% of the cover material is comprised of one or more non-fluorinated thermoplastic polymers selected from the group consisting of ionomeric polymers, non-ionomeric polymers and mixtures thereof.

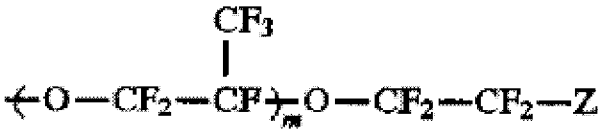
22. (Twice Amended) A method of enhancing the cut resistance, abrasion resistance, and durability of a golf ball which comprises forming a golf ball and applying to the golf ball a coating composition comprising a fluoropolymer, wherein [said] the fluoropolymer has the formula [



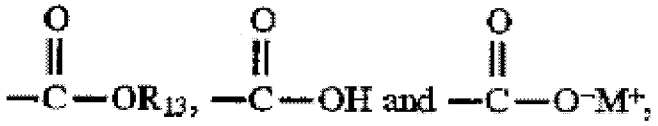
in which]



wherein a is a number from 1 to 100; b is a number from 99 to 1; c is a number from 1 to 50; R_1-R_7 are independently selected from the group consisting of H, F, alkyl, and aryl; wherein at least one of R_1-R_7 is F; and R_8 is [H, F, or] a moiety of the formula



in which m is a number from 1 to 18[:]; and Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb, and transition elements; R_9-R_{11} are independently selected from the group consisting of H, F, alkyl and aryl; and R_{12} is selected from the group consisting of

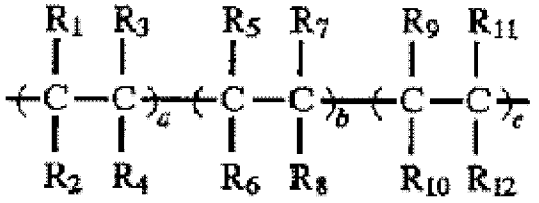


wherein R_{13} is a C_1-C_{12} linear or branched chain alkyl group.

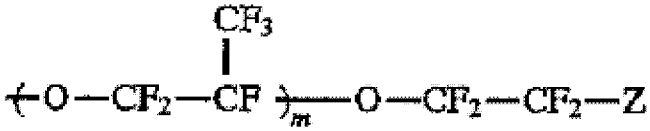
23. (Canceled)

24. (New) The golf ball of claim 1 wherein the golf ball has at least one coating layer over the cover layer.

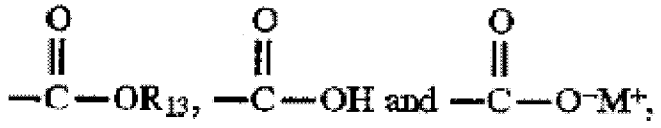
25. (New) A golf ball having at least a cover layer formed of a material selected from the group consisting of thermoplastic and thermosetting materials, wherein the improvement comprises applying upon the cover layer at least one coating layer, the coating layer comprising at least one functionalized fluoropolymer, wherein the fluoropolymer has the formula



wherein a is number from 1 to 100; b is a number from 99 to 1; c is a number from 1 to 50; R_1-R_7 are each selected from the group consisting of H, F, alkyl, and aryl; wherein at least one of R_1-R_7 is F; and R_8 is a moiety of the formula

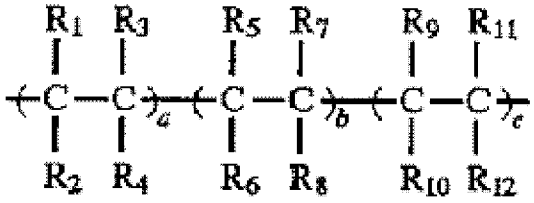


in which m is a number from 1 to 18; and Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb, and transition elements; R_9-R_{11} are independently selected from the group consisting of H, F, alkyl and aryl; and R_{12} is selected from the group consisting of

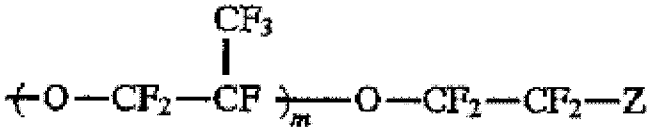


wherein R_{13} is a C_1-C_{12} linear or branched chain alkyl group.

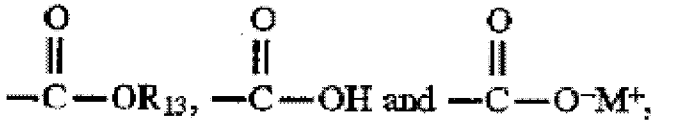
26. (New) A golf ball having a cover layer, the golf ball having at least one coating layer deposited upon the cover layer, the cover layer formed of a material selected from the group consisting of thermoplastic and thermosetting materials, wherein at least the cover layer and at least one coating layer comprise at least one functionalized fluoropolymer, wherein the fluoropolymer has the formula



wherein a is number from 1 to 100; b is a number from 99 to 1; c is a number from 1 to 50; R_1-R_7 are each selected from the group consisting of H, F, alkyl, and aryl; wherein at least one of R_1-R_7 is F; and R_8 is a moiety of the formula



in which m is a number from 1 to 18; and Z is selected from the group consisting of SO_2F, SO_3H, $SO_3^-M^{v+}$, COF, CO_2H, and $CO_2^-M^{v+}$, wherein v is the valence of M and M is a cation selected from Group I, Ia, IIa, IIb, IIIa, IIIb, IVa, IVb, and transition elements; R_9-R_{11} are independently selected from the group consisting of H, F, alkyl and aryl; and R_{12} is selected from the group consisting of



wherein R_{13} is a C_1-C_{12} linear or branched chain alkyl group.